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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,748	12/19/2001	Kazuoki Matsugatani	58609-US-KK/st	7634
27572	7590	05/31/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			HSU, ALPUS	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,748

Applicant(s)

MATSUGATANI ET AL.

Examiner

Alpus H. Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/5/02, 10/24/03, 12/17/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/5/02, 10/24/03, 12/17/03</u> | 6) <input type="checkbox"/> Other: _____  |

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1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. Claims 5, 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, line 4, "the said" should read as -- the -- or -- said -- only.

In claim 15, line 6, "each have" should read as -- each has --.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by SOININEN et al. in U.S. Patent No. 6,980,801, hereinafter referred as SOININEN.

Referring to claim 6, SOININEN discloses a wireless system (Fig. 1) comprising: a mobile terminal (MS); a plurality of sub-networks (HPLMN, VPLMN); and a plurality of base

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stations (BS1, BS2) each of which communicates with the mobile terminal by using a plurality of communication systems (RAN1, RAN2) which are different from each other, characterized in that the plurality of sub-networks is arranged, so that one of the base stations, which communicates with the mobile terminal by using a same communication system belonging to a same sub-network of said plurality of sub-networks, and the plurality of sub-networks are each connected to an Internet (11) by way of gateways (GGSN1, GGSN2) which are positioned for the plurality of sub-networks.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-5, 7-14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over SOININEN in view of JOHNSON et al. in U.S. Patent No. 6,625,135, hereinafter referred as JOHNSON.

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Referring to claim 1, SOININEN discloses a wireless system (Fig. 1) comprising: a mobile terminal(MS); and a plurality of communication systems (HPLMN, VPLMN) for communication with the mobile terminal, the systems being different from each other, characterized in that the communication systems each has base station (BS1, BS2) belonging to a sub-network (RAN1, RAN2) which is unique to the communication system, each sub-network being connected to an Internet (11) by way of a gateway (GGSN1, GGSN2) provided for the sub-network.

SOININEN differs from the claim, in that, it does not disclose the features of the mobile terminal having a plurality of mobile station network interfaces which can access the communication systems respectively, and means of switching communication systems accessed by the mobile station network interfaces depending on the communication quality of the communication systems, which are well known features in the art and commonly used in wireless communications field for interfacing and hand off purposes.

JOHNSON, for example, from the same field of endeavor, teaches the uses of a plurality of mobile station network interfaces (not shown) which can access the communication systems respectively, and means of switching communication systems accessed by the mobile station network interfaces depending on the communication quality of the communication systems (col. 8, lines 15-26, 32-40).

Therefore, it would have been obvious to one of ordinary skill in the art to implement the system in SOININEN to include the features of a plurality of mobile station network interfaces and switching means as taught by JOHNSON, to provide basic interfacing and switching function to further improve the system connectivity and quality assurance.

Referring to claim 4, SOININEN discloses that the first sub-network has a home agent and a the second sub-network has a foreign agent; and the mobile terminal makes access by using a home address in a case of communication with the base station which belongs to the first sub-network or makes access by using a care-of address determined by the foreign agent in a case of communication with the base station which belongs to the second sub-network (col. 2, lines 33-56).

Referring to claim 5, SOININEN discloses that the base station which belongs to the first sub-network communicates with the mobile terminal faster than the base station which belongs to the second sub-network (col. 5, lines 28-35).

Referring to claims 2 and 3, SOININEN discloses a wireless system (Fig. 1) comprising: a mobile terminal(MS); and a plurality of communication systems (HPLMN, VPLMN) for communication with the mobile terminal, the systems being different from each other, characterized in that the communication systems each has base station (BS1, BS2) belonging to a sub-network (RAN1, RAN2) which is unique to the communication system, each sub-network being connected to an Internet (11) by way of a gateway (GGSN1, GGSN2) provided for the sub-network.

SOININEN differs from the claims, in that, it does not disclose the features of having means of switching the communication systems accessed by the mobile station network interfaces based on cell position information of cells which are formed by the base stations of the communication systems and the present location of the mobile terminal and depending on the cell at the present location, and having the switching means to set switching positions of the communication systems based on the cell position information and route information in a case of

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implementation of route guidance of the mobile terminal by means of a navigation system, and carries out switching depending on a relation between the switching positions and the present location, which are also well known in the art and commonly used in wireless communications field for quality of service control purpose.

JOHNSON, for example, from the same field of endeavor, teaches the uses of switching means to set switching positions of the communication systems based on the cell position information and route information (col. 8, lines 15-26, 32-40).

Therefore, it would have been obvious to one of ordinary skill in the art to implement the system in SOININEN to include the feature of switching means to set switching positions of the communication systems based on the cell position information and route information as taught by JOHNSON, to further improve the system quality control purpose.

Referring to claims 7-12, SOININEN differs from the claim, in that, it does not disclose the features of the mobile terminal having a plurality of mobile station network interfaces which can access the communication systems respectively, and means of switching communication systems accessed by the mobile station network interfaces depending on the communication quality of the communication systems, which are well known features in the art and commonly used in wireless communications field for interfacing and hand off purposes.

JOHNSON, for example, from the same field of endeavor, teaches the uses of a plurality of mobile station network interfaces (not shown) which can access the communication systems respectively, and means of switching communication systems accessed by the mobile station network interfaces depending on the communication quality of the communication systems (col. 8, lines 15-26, 32-40).

Therefore, it would have been obvious to one of ordinary skill in the art to implement the system in SOININEN to include the features of a plurality of mobile station network interfaces and means of switching s taught by JOHNSON, to provide basic interfacing and switching function to further improve the system connectivity and quality assurance.

Referring to claims 13 and 14, SOININEN discloses the features of network interfaces making access using temporary IP addresses or fixed IP addresses (col. 2, lines 11-16, col. 7, lines 19-24).

Referring to claim 15, SOININEN discloses a wireless system (Fig. 1) comprising: a mobile terminal(MS); and a plurality of communication systems (HPLMN, VPLMN) for communication with the mobile terminal, the systems being different from each other, characterized in that the communication systems each has base station (BS1, BS2) belonging to a sub-network (RAN1, RAN2) which is unique to the communication system, each sub-network being connected to an Internet (11) by way of a gateway (GGSN1, GGSN2) provided for the sub-network.

SOININEN differs from the claim, in that, it does not disclose the features of having a plurality of mobile station network interfaces, each of which can access a different one of the plurality of communication systems, and means for routing located between the mobile station network interfaces and a section of running application software, said means for routing thereby switching the communication systems by connecting the application software running section to any one of the mobile station network interfaces, which are well known features in the art and commonly used in wireless communications field for interfacing and routing purposes.

JOHNSON, for example, from the same field of endeavor, teaches the uses of a plurality of mobile station network interfaces (not shown) which can access the communication systems respectively, and means of routing thereby switching the communication systems by connecting the application software running section to any one of the mobile station network interfaces (col. 8, lines 15-26, 32-40).

Therefore, it would have been obvious to one of ordinary skill in the art to implement the system in SOININEN to include the features of a plurality of mobile station network interfaces and routing means as taught by JOHNSON, to provide basic interfacing and switching function to further improve the system connectivity and efficiency.

8. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over SOININEN in view of JOHNSON as applied to claim 15 above, and further in view of WHITMORE et al. in Pub. No. US 2002/0122394 A1, hereinafter referred as WHITMORE.

The system provided from the teaching of SOININEN in view of JOHNSON differs from the claims, in that, it does not disclose the features of having routing tables in routing means for routing, and means for revising contents of the respective routing tables responsive to a command from the mobile terminal to update the routing tables, which are also well known in the art and commonly used in wireless communications field for data routing and updating purposes.

WHITMORE, for example, from the similar field of endeavor, teaches the uses of routing tables in routing means for routing, and means for revising contents of the respective routing tables responsive to a command from the mobile terminal to update the routing tables (paragraphs [0018] to [0033]), which can be easily adopted by one of ordinary skill in the art to

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implement into the system of SOININEN in view of JOHNSON, to further improve the system reliability and efficiency.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rautiola et al., Gudat et al., Forslow, Sonininen et al. '059, and Ogier et al. are all cited to show the common feature of integrated data transfer system utilizing gateways/routers, and wireless LAN and/or WAN via Internet similar to the claimed invention.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHH

A handwritten signature in black ink, appearing to read 'Alpus H. Hsu', written in a cursive style.

Alpus H. Hsu  
Primary Examiner  
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